

WESTWOOD RUN LAKE
Henry County
2004 Fish Management Report

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EXECUTIVE SUMMARY

- Westwood Run Lake is a 173-acre impoundment located approximately 4 mi west of New Castle, Indiana in Henry County. The lake, Westwood Park, and surrounding land are owned and operated by the Big Blue River Conservancy District. Anglers can access a fair portion of the shoreline from the park or launch a boat. There is a nominal park entrance fee and launch fee. Only electric motors may be used on the lake.
- A fish community survey was conducted June 1 to 3, and 10, 2004. Bluegill (53%), redear sunfish (22%), and largemouth bass (13%) were the predominant species collected by number.
- There were 738 bluegill collected that weighed 52 lbs. Bluegill measured 1.4 to 8.6 in and averaged 4.2 in. The percentage of harvestable size bluegill (6.0 in or larger) was 18%.
- Three hundred and one redear sunfish weighing nearly 69 pounds were collected. Redear sunfish ranged in length from 1.9 to 9.1 in and averaged 6.8 in. Approximately 82% of the redear were considered harvestable (6.0 in or greater) and 21% of those were at least 8.0 in long.
- There were 183 largemouth bass caught that weighed almost 94 lbs. Bass ranged in length from 3.7 to 18.6 in and averaged 9.8 in. Just 5% of the bass collected measured at least 14.0 in. Practicing catch and release for most of the 14.0 in and larger bass caught will help sustain a dense largemouth population capable of providing enough predatory pressure on panfish to keep them from overpopulating and their growth from stunting. Also, releasing keeper size bass and allowing them to continue growing should increase the odds of producing truly big bass in the future.
- Fifty-nine channel catfish weighing 136 lbs were collected. Channels ranged from 11.1 to 28.3 in. To maintain the channel catfish fishery, biennial stockings should continue at the rate of at least 16.7, 8.0 in channels/acre (2,889 total).
- The next fisheries survey at Westwood should be conducted in 2007.

INTRODUCTION

Westwood Run Lake is a 173-acre impoundment located approximately 4 mi west of New Castle, Indiana in Henry County. The lake, Westwood Park, and surrounding land are owned and operated by the Big Blue River Conservancy District. The fishery is managed by the Indiana Department of Natural Resources, Division of Fish and Wildlife (DFW). Anglers can access a fair portion of the shoreline from the park or launch a boat. There is a nominal park entrance fee and launch fee. Only electric motors may be used on the lake.

The fishery has undergone many changes in the last 15 years. In the early 1990's largemouth bass were overabundant. As a result, bass grew slow and few reached the 14.0-in minimum size limit. The abundant bass kept panfish (namely bluegill and redear sunfish) numbers low via excessive predation. To increase bass harvest and ultimately achieve a better balanced fishery, a 12 to 15-in slot limit for bass was imposed in 1992. By 1999, bass abundance had declined considerably, growth of bass had improved, and panfish recruitment and abundance were much better. Therefore, a recommendation was made to return to a 14.0-in minimum size limit for bass. The 14.0-in limit went into effect in 2002.

The last fisheries survey conducted at Westwood was in 2001 (Keller 2002). The present survey was conducted to evaluate the predator/prey balance.

METHODS

The fish community survey was conducted June 1 to 3, and 10, 2004. Physical and chemical characteristics of the lake were measured on the first day according to DFW survey guidelines (Shipman 2001). Aquatic vegetation was sampled on July 20, 2004 according to guidelines developed by Pearson (2004).

Fish were collected via one h (4, 15-min stations) of DC electrofishing at night, 8 gill net lifts, and 4 trap net lifts. Collected fish were measured to the nearest 0.1 in TL. Scales were taken from the dominant sport fish for age and growth analysis. Weight estimates of all species were calculated using central Indiana averages. Proportional stock density was figured for bluegill and largemouth bass (Anderson and Neumann 1996). The Bluegill Fishing Potential Index (BGFP) was also used to describe the bluegill fishery (Ball and Tousignant 1996).

RESULTS

The surface temperature of the lake on June 1 was 73° F. The thermocline was present between 15 and 20 ft of water. As a result, the dissolved oxygen level dropped from 10 ppm at 15 ft to 2 ppm at 20 ft. Conductivity was 300 μ S and the Secchi disk reading was greater than 11 ft.

Coontail and Eurasian watermilfoil were found at over half of the sites sampled during the vegetation survey. Other species that were present at 10% or more of the sites included chara, water stargrass, curlyleaf pondweed, leafy pondweed, and sago pondweed. Overall, 10 species of submergent vegetation, cattails, watermeal, duckweed, and filamentous algae were found.

A total of 1,381 fish weighing just over 403 lbs was collected. Eleven species and hybrid sunfish comprised the sample. Bluegill (53%), redear sunfish (22%), and largemouth bass (13%) were the predominant species collected by number. By weight, channel catfish (34%), largemouth bass (23%), redear sunfish (17%), bluegill (13%), and carp (9%) were the only species to account for greater than 1% of the collection.

There were 738 bluegill collected that weighed 52 lbs. Bluegill abundance by number (53%) was similar to 2001 (49%) while abundance by weight decreased from 23% to 13% in the present survey. The CPUE of bluegill via electrofishing was 506.0/h and via trap nets was 52.3/lift. Bluegill measured 1.4 to 8.6 in and averaged 4.2 in, compared to 4.4 in in 2001. The percentage of harvestable size bluegill (6.0 in or larger) was 18%. However, just 1% of the bluegill were at least 8.0 in. The dominant year classes of bluegill collected were age 2 (32%) and age 3 (51%). Combined, nearly 89% of age-2 and age-3 bluegill measured less than 6.0 in. Bluegill PSD was 14 compared to 10 in 2001. The BGFP score was 28 which corresponded to an “excellent” rating for the bluegill fishery.

Three hundred and one redear sunfish weighing nearly 69 pounds were collected. The CPUE of redear was 67.0/electrofishing h and 53.5/trap net lift. Redear abundance by number (22%) was similar to 2001 (24%) while abundance by weight was slightly less, 17% compared to 22%. Redear sunfish ranged in length from 1.9 to 9.1 in. The average size redear collected increased from 5.8 in in 2001 to 6.8 in in 2004. Approximately 82% of the redear were considered harvestable (6.0 in or greater) and 21% of those were at least 8.0 in long. Like bluegill, the predominant year class of redear collected was age 3 (67%).

Largemouth bass ranked third in abundance by number (13%) as in 2001, but fell to second in abundance by weight (23%). The 183 largemouth caught weighed almost 94 lbs. Bass ranged in length from 3.7 to 18.6 in and averaged 9.8 in, an increase from 8.0 in in 2001. Both the 2001 and 2002 year classes accounted for just over a third of the largemouth bass collected. Nearly three quarters of the bass in these two year classes were 8.0 to 11.5 in long. Largemouth bass PSD was 24. Just 5% of the bass collected measured at least 14.0 in.

Fifty-nine channel catfish weighing 136 lbs were collected. Channels ranged from 11.1 to 28.3 in. Other species of catfish collected were brown and black bullhead. Combined there were only eight bullhead collected, the largest of which was 13.6 in.

Together, pumpkinseed, green sunfish, and hybrid sunfish accounted for 6% of the fish collected by number. Nearly equal numbers of pumpkinseed and green sunfish were found, 34 and 33, respectively. The largest of these was a 6.7 in pumpkinseed. Eleven hybrid sunfish up to 7.8 in were collected.

Other species collected were yellow perch, common carp, and white crappie. Cumulatively, these species accounted for just 1% of the sample by number. Although few in number, the perch collected were large enough to interest anglers (7.8 to 10.4 in). The five carp sampled were 20.1 to 28.4 in long and weighed 36 lbs, enough to rank them fifth in abundance by weight (9%).

DISCUSSION

The predator/prey balance at Westwood Run Lake appears to be good. Bluegill and redear sunfish were the most numerous species collected followed by largemouth bass. Both bass and bluegill PSD were below the ranges that indicate balanced populations because of the strong showing from the 2001 and 2002 year classes which dominated the collection of both species. However, as those year classes of fish mature, bass and bluegill PSD's are likely to increase. The redear collection also had a dominant 2001 year class, but like bass and bluegill, several other year classes were also well represented indicating that successful recruitment continues to occur for all three species.

Bluegill and redear will offer anglers the best panfish opportunities at Westwood. With 82% of the redear collected measuring at least 6.0 in and 20% of those being at least 8.0 in long, redear should provide the highest quality panfish opportunities. Bluegill fishing has the potential

to become exceptional as the 2001 and 2002 year classes mature and provide more opportunities to catch larger fish. In addition to bluegill and redear, panfish anglers might also encounter yellow perch and crappie.

The proportion of largemouth bass that measured at least 14.0 in was low (5%). Bass from the 2001 and 2002 year classes should reach 14.0 in in the next couple of years. These year classes should help to increase the number of keeper size bass that anglers catch. Unlike when there was a slot limit on the lake and anglers were encouraged to keep many bass, now that the fishery is more balanced, anglers are not encouraged to keep every legal size bass caught. Practicing catch and release for most of the 14.0 in and larger bass caught will help sustain a dense largemouth population capable of providing enough predatory pressure on panfish to keep them from overpopulating and their growth from stunting. Also, releasing keeper size bass and allowing them to continue growing should increase the odds of producing truly big bass in the future.

Channel catfish typically are not able to sustain their populations in small reservoirs like Westwood because spawning habitat is often limited and a dense bass population is present that preys heavily on young catfish. Therefore, to maintain the channel catfish fishery, biennial stockings should continue at the rate of at least 16.7, 8.0 in channels/acre (2,889 total). The latest stocking of channel cats occurred in the fall of 2006 when 4,549 were stocked.

A variety of aquatic vegetation was found at Westwood in 2004. The vast majority will serve as valuable fish habitat. However, conditions arise when vegetation serves as more of a nuisance than a benefit. This has been the case at different times in the past at Westwood around several of the popular shore fishing areas. Vegetation would get so dense that it severely limited angling in those areas. Chemicals, often applied by private applicators, were used to clear up those spots and make them more accessible. This approach should continue to be taken in the future if nuisance situations arise in high use areas. The conservancy district is reminded that before any chemical or other vegetation control method is implemented, a permit from the DFW is required.

The next fisheries survey at Westwood should be conducted in 2007. The primary focus of the survey will be the predator/prey balance.

RECOMMENDATIONS

- Channel catfish should continue to be stocked on a biennial basis at the rate of at least 16.7, 8.0 in channels/acre (2,889 total)
- The next fisheries survey at Westwood should be conducted in 2007.

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